

Diversification in Agriculture

Introduction

Agriculture has an impact on rural communities, the rural economy and the environment and its position within the overall economy is changing. A possible, and rational response to these changing economic circumstances is for farm occupiers to seek to enhance their household income from sources other than conventional farming production through diversifying their business activities.

Diversification is widely held to offer considerable scope for improving the economic viability of many farm businesses and in turn reducing their dependence on the production of primary subsidised agricultural commodities.

Defra has been active in analysing a number of sources of data on diversification. The aim of this publication is to bring together information from the various surveys which record information on diversification, explain the differences between them and to look at a statistical definition of what is meant by diversification.

What is Diversification ?

When analysing the various sources of data on diversification it is clear that diversification can be defined in many ways. In some studies, for example, agricultural contracting may have been included as a diversified activity and in others it may not have.

In this paper we have broadly defined diversification as “the entrepreneurial use of farm resources for a non-agricultural purpose for commercial gain.” Hence, diversification reflects the reduced dependence of farmers on agriculture as a source of income. Diversification also implies some kind of entrepreneurial activity on behalf of the farmer. It should be noted that this definition used does not reflect what funding is available for “diversification” under the England Rural Development Programme. It is a definition used for statistical purposes and not administrative and policy ones. Further information on the England Rural Development Programme can be found at the following link:

<http://www.defra.co.uk/erdp/default.htm>

There are some obvious activities that are included as diversification within the definition above such as tourism, sport, recreation, processing, etc. and others that are not such as the production of organic or novel crops, which whilst possibly reflecting a change in focus and possibly entrepreneurial activity by the farmer remain agricultural activities. Others such as off-farm employment or investment income are not regarded as diversified activities as they do not utilise farm resources. Annex 1 clarifies the position of some of the

more uncertain examples of activities when using the broad definition given above.

Sources of Data on Diversification

In preparing this Notice, the following sources of information on diversification have been examined:

- the annual June Agricultural and Horticultural Census
- the Farm Business Survey (FBS)
- the Farm Diversification Benchmarking Study, (commissioned by Defra from the University of Exeter
- the Survey of Personal Incomes (conducted by the Inland Revenue).

Information from all but the FBS are published separately. The main results from the FBS and the annual census are given in Annexes 3 and 4

Comparisons between the various sources can prove difficult due to different definitions, samples and methodologies being used and each source has its own strengths and weaknesses. A summary of the differences is included in Annex 2. It is clear that the different sources use different definitions, sample sizes, etc. causing differences in the overall level of incidence of diversification.

Annex 3 contains the headline figures from the FBS which estimates that 56% of “full-time” farms in England in 2002/03 have a diversified business. This figure excludes all contract work, even non-agricultural contracting work. The FBS also measures income levels from diversified activities.

Annex 4 contains the headline figures from the June Census which estimates that 19% of “full-time” farms in England in 2003 have a diversified business. This is quite different from the estimate from the FBS which is mainly down to a large component of the FBS figures being letting of buildings for which there is no Census equivalent. The Census also currently operates at the holding level rather than the broader farm business basis of the FBS. Additionally as the Census is a postal questionnaire, the responses are subject to the farmers interpretation. A copy of the Statistics Notice can be found at the following link:

<http://statistics.defra.gov.uk/esg/statnot/jundiv.pdf>

A further source is the Farm Diversification Benchmarking Study, commissioned by Defra, and undertaken by Exeter University, in collaboration with the University of Plymouth. This year long study is based on research undertaken to review the state of farm diversification in England, analysing in particular, developments during the past decade. The key aim was to identify the importance of diversified enterprises to farm business viability. The headline figures from the study estimated that 65% of “full-time” farms in 2002 had a diversified business. A full copy of the study can be found at the following link:

http://statistics.defra.gov.uk/esg/index/list.asp?i_id=014

The Inland Revenue also run the annual Survey of Personal Incomes which estimates the total income assessed for tax from for various sectors, one of which is agriculture. The results provide only a broad and generalised indication of farmers' total income assessed for tax purposes. Other self-employment income will also include income from non-diversified activities and so it is difficult to measure the true incidence of diversification. The Inland Revenue have delayed publication of 2001/02 Survey of Personal Incomes data as the data is undergoing further investigation and credibility checks.

As stated above comparisons between the various sources are difficult. This paper highlights some of the reasons for the differences which should be borne in mind when using the results from the various sources.

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ANNEX 1

DETAILS ON THE DEFINITION OF DIVERSIFICATION

What is included in diversification within this definition?

The following would be included as diversification:

- Non-agricultural contracting. Non-agricultural contracting is included in diversification because it is likely to involve some entrepreneurial activity by the farmer.

What is excluded from diversification within this definition?

The following would be excluded as diversification:

- Letting of land for agricultural or non-agricultural end-purpose. Even if the land was subsequently used for non-agricultural activity, this is not diversification as it is not the farmer who is undertaking this activity. Also, it is assumed that the farmer does not have any entrepreneurial role in the letting of land. This means letting of land for way-leaves is not a diversified activity.
- Agricultural contracting. This is excluded because, although it could include some entrepreneurial activity from the farmer, the activity itself is agricultural. (Although RES would count this as potential diversification).
- Hiring of other assets for an agricultural or non-agricultural end-purpose. Letting of other assets is excluded because it is unlikely that this will involve the farmer in any entrepreneurial activity.
- Agri-environment schemes. Such payments are excluded because it is not clear that these require any entrepreneurial activity by the farmer. Ideally it would be possible to identify which of these payments are made for non-agricultural activities and then classify the subsidies as diversified or otherwise accordingly. However, to do so would be very difficult and the criteria associated with these subsidies is likely to change as decoupling is introduced. The agri-environment subsidies are excluded from diversification, for the present time at least.
- Imputed rent is not included as a diversified activity. Imputed rent is a useful accounting concept for costing production, but it does not measure revenue or output and so it should not be included.

Diversified or not?: letting of buildings

Reasons for including this in the definition of diversification:

- In some cases, in order to let out a building the farmer undertakes some entrepreneurial activity (e.g. converting the building). However, this is an inconsistent approach if it was equally likely that the farmer had to undertake entrepreneurial activity to enable him to let land (e.g. maintenance of fences and gates). This inconsistency could be

resolved by defining 'entrepreneurial activity' as an activity that is undertaken in order to use the resource for non-agricultural commercial purposes and would not be undertaken if the land were to continue to be used for agriculture.

- The farmer may have an active role to play as landlord and this is regarded as an entrepreneurial activity.
- If the letting of buildings is excluded from diversification, this would exclude letting of holiday cottages to tourists which is instinctively a diversified activity.

Reasons against including this as diversification:

- In some cases (particularly where the end purpose is agricultural), no such entrepreneurial activity would be required. To this extent, letting of buildings would not generally be thought of as diversification.

A possible solution to determine whether the letting of buildings as a diversified activity is to use one of the following criteria:

- Is the end purpose agricultural or non-agricultural? A disadvantage of using end-purpose as a guide to whether an activity is diversified or not is that this information may be difficult to collect. Yet such practicalities should not necessarily determine what definition of diversification is used. Another disadvantage of using end-purpose to define diversification is that it is not intuitive from the farmer's perspective. How the let farm resource is used is irrelevant to the farmer.
- Length of lease? Short leases may require the farmer to play a greater role as landlord (an entrepreneurial activity). Also, buildings let to tourists are more likely to be short lease.
- Extent of entrepreneurial activity required to let the building? For example, how much time or money has the farmer spent on renovating the building, advertising it, etc in order to let it out?

There are obviously no hard and fast rules for defining some of the broader activities and where possible, these could be broken down further.

Definition of farm resources

Farm resources are defined as land, capital or paid farm labour that was previously used for agricultural purposes. Paid farm labour will exclude labour of the farmer or spouse. Hence, if the farmer / spouse take up external employment, then this will be classified as other gainful activity, rather than diversified activity. However, any activities that the farmer / spouse spend their time on will still be classified as diversified activities whenever any land, capital or other paid labour previously used for agricultural purposes are also employed (e.g. farmer running a shop selling produce from the farm).

Whether an activity is defined as diversified or as another gainful activity would depend on a combination of factors. For example: whether the farm resource previously used for agricultural purposes could be switched back to agricultural use; whether the accounts of the activity are separate from those

of the farm; and how long it has been a diversified activity. It is useful to think of diversification as a transition rather than an end-state.

Note that the definition of capital in the context of farm resources should exclude money. For example, if a farmer uses some of his profits from farming to invest in stocks and shares rather than investing in the farm, then this would not be classified as diversified activity. Rather, this would be revenue from other gainful activity.

Defining agriculture

Agricultural activities are defined using the Economic Accounts for Agriculture codes, a copy of which is available from Eurostat and at the following link:

<http://europa.eu.int/comm/eurostat/Public/datashop/print-catalogue/EN?catalogue=Eurostat&product=KS-27-00-782--I-EN>

These are almost identical to the Standard Industrial Classification codes – a copy of which is available from the Office of National Statistics and at the following link:

<http://www.statistics.gov.uk/StatBase/Product.asp?vlnk=10378&Pos=1&ColRank=1&Rank=240>

However, it should be noted that whilst diversified activities must be non-agricultural, non-agricultural activities are not necessarily diversified. For example, other employment or other enterprises that are independent of the farm.

Diagrammatic Representations

Below are two diagrammatic representations of how non-agricultural and diversified activities are defined which summarise the definitions and methodologies described above.

The first diagram classifies diversified activities using a simple flow chart. If particular questions are answered and activities are defined this determines whether the activity is classed as diversified in the bottom row. The example of where the leasing of buildings could be classed as a diversified or non-diversified activity is included.

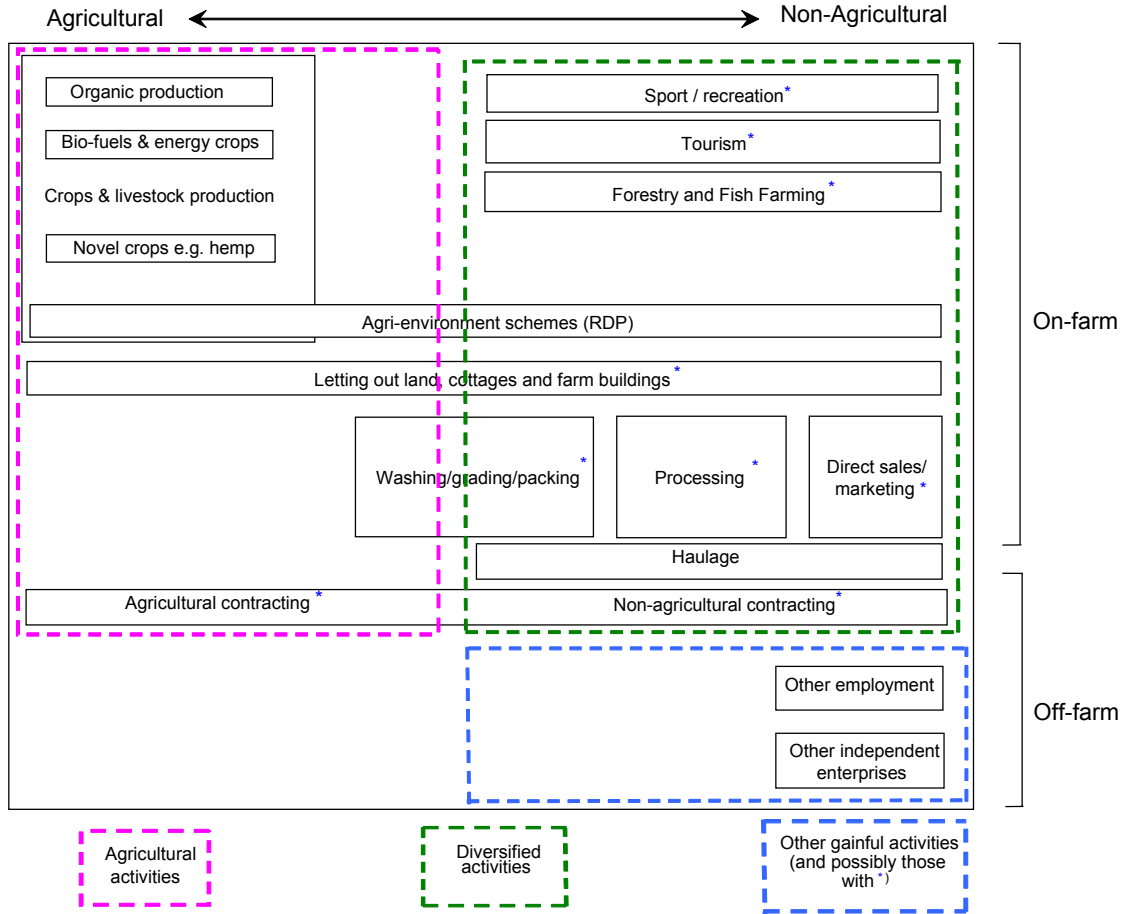
The second diagram looks at agricultural / non-agricultural and on-farm / off farm splits of various activities including other gainful activities. Some activities may cut across agricultural and non-agricultural such as haulage, contracting and the letting out of land, cottages and buildings.

Classifying Diversified Activities

Use of farm resources?											
	No	Yes									
		Agricultural activities*				Non-agricultural activities*					
Other gainful activity (e.g. farmer is employed as an agricultural consultant, spouse operates a B&B independent from the farm business)		Agricultural contracting (defined as hire of capital and hire of labour to operate it for an agricultural end purpose e.g. sheep shearing or cleaning and disinfecting of others' farms following FMD).	Other (e.g. breeding livestock, growing crops, organic farming, energy crops, packing mushrooms that have been grown on the farm assuming there is no market for unpacked mushrooms or the act of packing them is inseparable to the activity of harvesting them.)	Agri-environment scheme payments	Non-agricultural contracting (defined as hire of capital and hire of labour to operate it for a non-agricultural end purpose, e.g hire of van).	Rent of land (regardless of end purpose) e.g. letting land to another farmer to grow potatoes on, e.g. way-leaves rent.	Letting of buildings e.g. letting a barn to another farmer, letting a cottage to tourists, letting a farmhouse to farm workers.	Letting of other assets e.g. hiring a tractor		Other (e.g. cheese making, farm shop, building garden furniture using farm resources, creating wool products from raw wool, B&B, sundry woodland sales, using farm resources to teach horse riding)	
Is end purpose agricultural?	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	No	Yes	n/a
Diversified activity?	No	No	No	No	Yes	No	Yes/No	Yes	No	Yes	

*Defined according to Economic Accounts for Agriculture.

Defining agricultural, diversified and other gainful activities



ANNEX 2

Summary information

	Farm Business Survey	Exeter Study	June Census	Survey of Personal Incomes
Population	Businesses of over 8 ESU	All holdings	All holdings	Farmers assessed for tax
Sample	Approx 2,100 of varying types, sizes and tenure	Approx 2,800 postal and 225 interviews of various types, sizes and tenure	Approx 80,000 of various types, sizes and tenures	Approx 28,000 random sample
Definition	Quite broad, excludes all contracting work	More conventional although includes speciality crops and agricultural contracting	Non-agricultural activities as interpreted by the farmer	Other self employment income (some diversification will be included in income from ..
Main reasons for variation in headline figure	Exclusion of contracting work, inclusion of letting of buildings	Inclusion of speciality crops and agricultural contracting	Data limitations in particular for contracting	Self-employment income will also include income from non-diversified activities
Strengths	Broad definitions but can be broken down into parts and estimates of income from diversified activities available	Completely focused on diversification and provides separate estimates of income and profit by type of activity	Large sample	Large sample includes data on other earned income and income from all other sources
	Recently reviewed and enhanced	Comparisons by full/part time	Longitudinal analysis	Reliable source and good value for money
	Comparison with other farming attributes	Can link to June Census	Link to Exeter Study	Provides comparison with other sectors
Weaknesses	Doesn't include independent businesses and only collects for fully integrated activities	Known small sampling problem	Open to large interpretation by farmers on definitions of diversification	Can't split out diversification if included in agricultural self-employment for tax purposes
	Small sample and full time farms only	Small sample for postal and interview survey	Operates at holding rather than business level	Individual and not farm records
	No net income measures for non-ag activities Break in series following review and enhancement	Decade since last study	Poor definitions	Problems with interpretation
Differences in diversification	Excludes speciality crops / livestock	Includes speciality crops / livestock	Excludes speciality crops / livestock	Includes income from all other non-agricultural self-employment
	Excludes all contracting	Includes agricultural contracting	Excludes all contracting	

ANNEX 3

DIVERSIFIED ACTIVITIES: FARM BUSINESS SURVEY

The following tables from the Farm Business Survey relate to farm businesses of size 8 or more European Size Units (ESU). This is the minimum size considered sufficient to occupy a farmer full-time on agricultural work. This threshold is important when considering output and income from non-agricultural activities since part-time farms would be expected to rely more on income from other sources.

The Farm Business Survey does not distinguish between agricultural and non-agricultural contract work. It has been assumed that the former predominates and so contract work has been excluded from the current definition of diversified activities.

Table 1: Diversified and non-farm activities — England ('full-time' farms ≥ 8 ESU)

	Number of farms		% of total	
	2001/02	2002/03	2001/02	2002/03
Farms of size ≥ 8 European Size Units (ESU)	63,300	60,400	100 %	100 %
of which:				
— have diversified businesses ^(a)	35,600	34,100	56 %	56 %
— where farmer/spouse have other employment/self-employment income	16,900	15,100	27 %	25 %
— with either	44,100	41,900	70 %	69 %

^(a) excluding all contract work (even non-agricultural work)

- Around 70% of farming households on farms of 8 ESU or more supplement their income from agriculture, either by diversifying into other activities or through outside self-employment or employment.
- Over half of farms have diversified activities and a quarter of farmers or their spouses work off the farm.

Table 2: Income from agricultural and non-agricultural activities

	2001/02 (£/farm)	2002/03 (£/farm)
Total income from all sources	20,300	23,900
Of which:		
— from diversified businesses ^(a)	1,400	1,800
— from off-farm employment/self-employment	3,200	3,300
— from other sources (eg investments)	1,900	2,100
Occupiers Net Income ^(b) (this includes about 80% of diversified activities)	14,800	18,000

^(a) For activities fully integrated into the farm business (ie with no separate account), income is not directly measured by the Farm Business Survey but output is. Income for these activities (the majority) are estimated using an overall profit margin of 28%, taken from a recent study by the University of Exeter.

^(b) The more widely recognised Net Farm Income measure is not appropriate here because it is calculated on a tenant basis. It is mainly landlord assets which are used for diversified activities.

- Although diversified activities are widespread, the average income from them is small

Table 3: Types of diversified activities (2002/03) associated with farms ≥ 8 ESU

	No of farms ≥ 8 ESU	% of farms ≥ 8 ESU	Average output with (£/farm)	Total output (£ m)
Core farming activities (excluding diversification)	59,800	100 %	163,300	9,772
of which:				
— contract work (including some non-farm work) ^(a)	29,300	49 %	9,800	286
Diversified activities	33,700	56 %	11,900	400
of which: ^(b)				
— rent from buildings for non-farming use	29,100	49 %	8,100	235
— processing and retailing of farm produce	5,300	9 %	17,300	92
— tourist accommodation and catering	2,100	3 %	10,300	21
— sport and recreation	4,300	7 %	6,700	29
— rural crafts	500	1 %	48,300	25

^(a) For consistency with the definition of diversified activities used elsewhere in this Release, this heading is excluded from diversified activities since most contract work is assumed to be agricultural

^(b) Numbers of farms for the enterprise groups sum to more than the total because some farms have more than one diversified enterprise

- The most common form of diversification is renting of buildings for non-farming use. Although the Farm Business Survey does not record how much of the contract work in Table 3 is for non-agricultural activities, it is likely that this too is fairly widespread.
- Although rural crafts and sport and recreation have the lowest participation rates, they are generally operated on a bigger scale than other forms of diversification, in terms of value of output per farm.

Table 4: Size of diversified farm businesses in 2002/03 - England full time farms >= 8 ESU

Output from diversified businesses	No. of farms with diversified activities	% of farms with diversified activities	% of all farms of size >= 8 ESU
< £500	8,500	25%	14%
£500 - <£1,000	1,800	5%	3%
£1,000 - <£5,000	8,900	26%	15%
£5,000 - <£10,000	4,900	14%	8%
£10,000 - <£20,000	4,600	14%	8%
£20,000 - <£50,000	3,600	10%	6%
£50,000 & over	1,800	5%	3%
TOTAL	34,100	100%	56%

- Although 56% of 'full-time' farmers have diversified businesses, many of these activities are very small-scale; for a quarter of farmers with diversified activities, the output from these diversified activities is less than £500.
- For 15% of farmers with diversified activities however, output from these businesses was over £20,000, capable of yielding an important supplementary income.

Regional results

The Farm Business Survey is a sample survey of 2200 farms in England which are then weighted to produce national results. Because of the small sample size, results for Government Office Regions are subject to significant sampling error. Despite this, some regional differences are discernable and significant, but the following tables should be treated with caution.

Table 5: Proportion of full-time farms ≥ 8 ESU with diversified activities ⁽¹⁾ — England 2002/03

	England ⁽²⁾	NE & YH	NW	EM	WM	EE	⁽²⁾ SE & London	SW
Total number of farms ≥8 ESU	60,442	10,303	5,171	6,665	7,978	9,182	7,919	13,225
Percentage with diversified activities ⁽³⁾	56 %	67 %	39 %	66 %	51 %	52 %	72 %	47 %
of which:								
renting of buildings for non-farming use	49 %	61 %	24 %	62 %	46 %	42 %	68 %	36 %
processing and retailing of farm produce	9 %	5 %	14 %	6 %	6 %	8 %	13 %	10 %
tourist accommodation and catering	7 %	6 %	3 %	1 %	3 %	10 %	13 %	8 %
Sport and recreation	3 %	5 %	0 %	1 %	5 %	2 %	4 %	5 %
rural crafts	1 %	0 %	3 %	0 %	0 %	1 %	1 %	1 %
Percentage of farms involved in contract work (assumed mainly agricultural)	49 %	55 %	34 %	55 %	40 %	51 %	55 %	45 %

⁽¹⁾ Note on sampling errors. The 75% confidence interval for the percentage of farms in England with non-agricultural activities is 55% to 58%. The equivalent 75% confidence intervals for regions typically range from 3 to 6 percentage points either side of the estimates.

⁽²⁾ Sample sizes for the North East and London are too small for results to be shown separately

⁽³⁾ Excludes contract work (shown separately at bottom of table)

Table 6: Output from farm and diversified activities 2002/03 (£ million) ⁽¹⁾
Full-time farms ≥ 8 ESU

	England ⁽²⁾	NE & YH	NW	EM	WM	EE	⁽²⁾ SE & London	SW
Output from core farming (excl. diversified activities)	9,458	1,496	602	1,014	1,119	2,092	1,421	1,715
Output from diversified activities ⁽³⁾	425	45	16	38	31	88	123	83
of which output from:								
renting of buildings for non-farming use	87	12	12	4	3	21	25	10
processing and retailing of farm produce	237	25	3	31	23	53	70	34
tourist accommodation and catering	41	2	1	0	3	3	7	25
Sport and recreation	31	6	0	3	2	9	1	10
Output from contract work (included in core farming above)	286	44	9	24	32	98	50	30

⁽¹⁾ Note on sampling errors. The 75% confidence interval for output from diversified activities in England is £402m to £459m. The 75% confidence intervals for regions are typically ± 15% of the estimates.

⁽²⁾ Sample sizes for the North East and London are too small for results to be shown separately

⁽³⁾ Excludes contract work (shown separately at bottom of table)

ANNEX 4

DIVERSIFIED ACTIVITIES: JUNE CENSUS

The June Agricultural and Horticultural Census has asked questions on diversification since 1998. Data is collected using tick boxes on the form, to indicate which activities are being carried out on the holding.

Below is a table showing incidence of total diversification from the June Census.

Table 1: diversified activities on agricultural holdings > 8 European Size Units (ESU).

	1998	1999	2000	2001	2002	2003
All diversification (a)	14.8%	15.2%	18.1%	18.3%	18.1%	19.4%
Tourism	5.8%	5.9%	6.1%	6.1%	5.6%	6.1%
Sport / Recreation	5.2%	5.3%	7.5%	8.9%	7.1%	8.2%
Direct Sales	3.0%	3.0%	3.5%	4.3%	4.0%	4.6%
Processing	1.1%	1.0%	1.1%	1.4%	1.1%	1.3%
All other activity	2.4%	2.6%	3.7%	3.3%	3.9%	3.7%

* data excludes minor holdings

(a) excludes any agricultural / non-agricultural contracting

Due to the simplistic nature of the tick boxes in this section, it is very difficult to accurately define which activities constitute diversification. It is very much left to the individual to decide which activities fall into which activity..

Contracting has not been included as many data suppliers may see agricultural contracting as part of their agricultural business and not class it as a diversified activity.

Results from the June Census have also been produced broken down by farm size, farm type and region. For further information see the separate Statistical Notice 06/04, published on 29th January 2004.

Data is collected at a holding level so is not directly comparable to the Farm Business Survey, which collects information on a business level.